

# Peratech, London College of Fashion, University of the Arts London

## Sensors invisibly incorporated into clothes, monitoring vital signs to enhance health and well-being

### About the Project

Touch screen technology has revolutionised the way we interact with our gadgets, but what if the same technology could be embedded into our clothing and used to enhance our wellbeing? A collaboration between the London College of Fashion, University of the Arts London, and Queen's Award-winning touch technology company Peratech is exploring just that.

As Professor of Fashion and Textile Design and Technology at LCF, Sandy Black has spent her career examining the intersection of design and technology. Through conversations with Peratech, LCF discussed combining a design and fashion aesthetic with sustainable technology that enhances people's experiences.



This is a research project – sitting in a field between healthcare, medical and sports and fitness – to explore the needs base and applications for wearable technology. Whether these clothes are monitoring energy levels, a facet of nutrition, or emotional wellbeing,

### Fast Facts

**Sector:** Fashion, Smart Materials, Health

**Funding Source:** EPSRC ICASE Awards

**Total Project Value:** £88,000

**Duration:** October 2011 – April 2015

**Market Impact:** While the PhD will not end with a market-ready product, Peratech will take the research forward to prepare for market release.

**Creative Industries KTN input:** CIKTN was allocated studentships by EPSRC, and shortlisted the six successful applications.

Professor Black and Peratech believe the sensory-aware textiles can enhance lifestyle and form a part of preventative self-monitoring.

### Benefits of Funding

Professor Black knew about the EPSRC's ICASE awards through her work, and when CIKTN was allocated six studentships from the science research council she recognised it would be perfect for this interdisciplinary project.

As a result of winning the funding, LCF and Peratech have been able to recruit a student to the project. The doctoral candidate is able to spend the first half of the three-and-a-half year project scoping the territory and technology.

After 18 months of exploration and refining ideas, the final project will be confirmed and experimentation will begin, resulting in prototypes and swatches. Peratech will then be able to take this body of work to develop ready for market release.

### Results

LCF and Peratech are only eight months into the project, so are still firmly in the scoping and research phase. They are examining details of the technology available and engaged in detailed conversations.

While the PhD won't end with a market-ready product, any innovation will have commercial benefit further down the line. In addition, the process of collaboration between the two disciplines of design and technology and between academia and industry will provide valuable knowledge for the future development of design-led technology.

**“It was really important that CIKTN secured this EPSRC funding ring-fenced for the creative industries sector. It enabled new hybrid technology and design-based work to be developed, pioneering research in the spaces between arts and science and engineering.”**

Professor Sandy Black,  
London College of Fashion,  
University of the Arts London